

WHAT IS CLAIMED IS:

1. A method for dimmable control of a multiple output EL lamp driver having a power converter, a plurality of EL lamps wherein one terminal of the EL lamp is coupled to a single common terminal, a plurality of half bridge circuits each having an output impedance wherein one half bridge circuit is coupled to the single common terminal and each remaining terminal of each EL lamp is coupled to a separate individual half bridge circuit, a logic circuit coupled to each of the half bridge circuits, and an oscillator coupled to the logic circuit comprising:

minimizing the output impedance of the half bridge circuit coupled to the single common terminal to prevent to brightness crosstalk between EL lamps;

selecting output impedances of remaining half bridge circuits to produce rounded waveforms across terminals of the EL lamps;

manipulating a drive waveform of one of the plurality of EL lamps to control brightness.

2. The method of Claim 1 wherein the step of manipulating a drive waveform comprises controlling a phase shift of the drive waveform to control brightness.

3. The method of Claim 2 further comprising varying a phase shift of the drive waveform by a digital counter.

4. The method of Claim 2 further comprising varying a phase shift of the drive waveform by an analog device.

5. The method of Claim 1 wherein selecting output impedances of remaining half bridge circuits further comprises selecting output impedances of remaining half bridge circuits by using a resistor in series with the half bride circuit and the EL lamps.

6. The method of Claim 1 wherein selecting output impedances of remaining half bridge circuits further comprises selecting output impedances of remaining half bridge circuits by selecting a transistor of a suitable size for the half bridge circuits to limit and control output current characteristics.

7. The method of Claim 1 wherein selecting output impedances of remaining half bridge circuits further comprises selecting output impedances of remaining half bridge circuits by using an analog control circuit to predetermine output current characteristics of the half bridge circuits.

8. The method of Claim 1 wherein selecting output impedances of remaining half bridge circuits to produce rounded waveforms across terminals of the EL lamps further comprises providing output impedances of approximately 33,000 ohms.

9. The method of Claim 1 wherein the step of manipulating a drive waveform comprises controlling a relative phase of predetermined cycles of the drive waveform to control brightness.

10. The method of Claim 9 wherein controlling a relative phase of predetermined cycles of the drive waveform to control brightness further comprises uses a binary code to control the predetermined cycles.

11. The method of Claim 9 further comprising using a binary code to gate the predetermined cycle positions of the drive waveform to control brightness.

12. The method of Claim 1 wherein the step of manipulating a drive waveform comprises controlling a phase shift of the drive waveform to control brightness.

13. The method of Claim 12 further comprising varying the phase shift of the drive waveform by a digital counter.

14. The method of Claim 12 further comprising varying the phase shift of the drive waveform by an analog counter.

15. A method for dimmable control of an output EL lamp driver having a power converter, an EL lamp, a first half bridge circuit each having an output impedance wherein the first half bridge circuit is coupled to first terminal of the EL lamp and a second terminal of the EL lamp is coupled to second half bridge circuit, a logic circuit coupled to the first and second half bridge circuits, and an oscillator coupled to the logic circuit comprising:

minimizing the output impedance of the first half bridge circuit coupled to the first terminal to prevent to brightness crosstalk;

selecting output impedance of second half bridge circuit to produce rounded waveforms across terminals of the EL lamp;

manipulating a drive waveform of the EL lamps to control brightness.

16. The method of Claim 15 wherein the step of manipulating a drive waveform comprises controlling a phase shift of the drive waveform to control brightness.

17. The method of Claim 16 wherein controlling the phase shift of the drive waveform further comprises controlling the phase shift by a digital counter.

18. The method of Claim 16 wherein controlling the phase shift of the drive waveform further comprises controlling the phase shift by an analog device.

19. The method of Claim 17 further comprising a second digital counter for producing the drive waveform phase shift.

20. The method of Claim 19 further comprising providing a variable means for controlling a rate of change of the second digital counter for producing the drive waveform phase shift.

21. The method of Claim 20 further comprising using a digital rate multiplexer as the variable means.

22. The method of Claim 19 further comprising providing a digital comparator to control a final phase shift counter value after a transition.

23. The method of Claim 18 further comprising providing variable means for controlling a rate of change of the analog device, the voltage of the analog device represents a produced drive waveform phase shift.